

# CPSC 304 Project Cover Page

Milestone #: 4

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Group Number: 56

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

No AI tools have been used during the creation of this milestone.

## Link to the repository:

[https://github.students.cs.ubc.ca/CPSC304-2a024W-T2/project\\_j4m1n\\_n0t1v\\_v7l9t](https://github.students.cs.ubc.ca/CPSC304-2a024W-T2/project_j4m1n_n0t1v_v7l9t)

## Project Description

This application is for a restaurant test kitchen. It helps with menu development for restaurants. The domain is contained within the entirety of the kitchen plus the suppliers. The application also contains the recipes for each menu item which are provided by the chefs. We have chefs who develop recipes that take ingredients, and those ingredients are all supplied by suppliers. Each recipe requires equipment to be made into menu items. The recipes are used by the chefs and they make menu items, and those menu items are either foods or drinks. Each menu item can also be a part of a combo, or have add-ons such as fries or drinks.

The final project is built with React.js and Next.js and consists of multiple pages, where each page is a relation. Each page consists of the table for each relation, a potential query depending on the relation, and the ability to count the tuples for each table. We were able to implement every relation we originally had for milestone 2.

We stuck with an unnormalized version of our data to keep things simpler. Meaning relations such as ChefExperience and ChefStatus were joined back into Chef. Normalizing everything would have made some queries harder and would've added way too many extra pages, making the project more cluttered than it needed to be. The cut back didn't significantly decrease the overall project size, so the team decided it was an effective decision.

All the code used to perform each queries and page location can be found at:

**Insert: appService.js: 224, located on Recipe page**

**Update: appService.js: 253, located on Recipe page**

**Delete: appService.js: 269, located on Recipe page**

**Select: appService.js: 283, located on Equipment page**

**Project: appService.js: 332, located on MenuItem page**

**Join: appService.js: 342, located on Ingredients In Recipe page**

**Aggregation with GROUP BY: appService.js: 360, located on MenuItem page**

Group by all the cuisine types of each menu item and get their average price.

```
SELECT cuisine, AVG(price)
FROM MenuItem
GROUP BY cuisine
ORDER BY AVG(price) ASC
```

**Aggregation with HAVING: appService.js: 375, located on MenuItem page**

Get the minimum price based on their cuisine type and whether or not they are gourmet.

```
SELECT cuisine, isGourmet, MIN(price)
FROM MenuItem
GROUP BY cuisine, isGourmet
HAVING MIN(price) < 50
```

**Nested aggregation with GROUP BY: appService.js: 390, located on Chef page**

Get the average years of experience of each seniority level that has at least 2 Chefs

```
SELECT C1.seniority, AVG(C1.years_of_experience) AS avgyoe, COUNT(*) AS count
FROM Chef C1
GROUP BY C1.seniority
HAVING 1 < (SELECT COUNT(*)
            FROM Chef C2
            WHERE C1.seniority = C2.seniority)
```

**Division : appService.js: 407, located on Chef's Recommended page**

Get the Chefs that recommend all Gourmet Menu Items

```
SELECT *
FROM Recommends R1
WHERE NOT EXISTS (
    SELECT M.menu_item_name
    FROM MenuItem M
    WHERE isGourmet = 1
    MINUS
    (SELECT R2.menu_item_name
    FROM Recommends R2
    WHERE R1.chef_name = R2.chef_name)
)
```

Each relation's table right after kitchen.sql runs.

Chef:

## Show Chef table

Name	Years of Experience	Seniority	Cooking License
Ryan	10	master	Nut
Perry	1	apprentice	Common
Jerry	7	apprentice	Nut
Gordon	20	master	Halal
Gordon Sr.	40	master	Halal
William	2	novice	Gluten
Louis Jr.	0	beginner	Dairy
Louis Sr.	1	beginner	Dairy
Louis	10000	master	All

RecipeOwens:

Show Recipe table

Recipe ID	Chef Name	Recipe Name
1	Perry	Garlic Beef
2	Louis	BigWay Hot Pot
3	Ryan	Roast Turkey
4	Gordon	Beef Wellington
5	William	Gluten Free Mushroom Pizza
6	Louis	Apple Pie

Ingredients:

## Show Ingredients table

Ingredient Name	Price
Garlic	1
Salt	3.35
Turkey	35
Caviar	500
Onion	0.5
Potato	0.67
Apple	0.45
Blueberries	6.99
Gluten Free Mushroom	2.35
Dough	2.87

Has:

## Show Recipe Has Ingredient table

Recipe ID	Ingredient Name	Quantity	Unit
6	Apple	3	lb
3	Turkey	1	item
5	Gluten Free Mushroom	1	lb
5	Dough	3	lb
1	Garlic	8	item
1	Salt	1	tablespoon
2	Salt	1	tablespoon
3	Salt	1	tablespoon
4	Salt	4	teaspoon
5	Salt	4	teaspoon
6	Salt	2	teaspoon



Equipment:

### Show Equipment table

Equipment Name	Equipment Material
Oven	Electronic
Pan	Metal
Pot	Metal
Spatula	Wood
Whisk	Metal

Uses:

### Show Recipe Uses Equipment table

Equipment Name	Equipment Material	Recipe ID
Oven	Electronic	3
Oven	Electronic	5
Pan	Metal	1
Pan	Metal	4
Pot	Metal	2

Makes:

### Show Recipe Makes MenuItem table

Recipe ID	Chef Name	Menu Item Name
1	Louis	Garlic Beef
2	Louis	BigWay Hot Pot
3	Gordon	Roast Turkey
4	Gordon	Beef Wellington
5	Perry	Gluten Free Mushroom Pizza

MenuItem:

Show Menu Items table

Menu Item Name	Cuisine	Price	Dietary Restrictions	License Requirement	Gourmet
Garlic Beef	Chinese	10	N/A	Common	No
BigWay Hot Pot	Chinese	25	Contains Nuts	Nut	No
Roast Turkey	American	45	Halal	Halal	No
Beef Wellington	American	155.67000000000002	N/A	Common	Yes
Gluten Free Mushroom Pizza	Italian	20	Gluten Free	Gluten	Yes
Beer	N/A	6.5	N/A	Common	No
Milk Tea	Taiwanese	7	Contains Milk	Dairy	No
Candied Bacon Bourbon	N/A	18	N/A	Common	Yes
Lemonade	N/A	3.25	N/A	Common	No
Root Beer	N/A	1.5	N/A	Common	No

Food:

### Show Food table

Menu Item Name	Course
Garlic Beef	Entree
BigWay Hot Pot	Entree
Roast Turkey	Entree
Beef Wellington	Entree
Gluten Free Mushroom Pizza	Entree

Drinks:

### Show Drinks table

Menu Item Name	Alcohol
Beer	Yes
Milk Tea	No
Candied Bacon Bourbon	Yes
Lemonade	No
Root Beer	No

Recommends:

### Show Chef's Recommended table

Chef Name	Menu Item Name
Gordon	Beef Wellington
Gordon	Candied Bacon Bourbon
Gordon	Gluten Free Mushroom Pizza
Perry	Garlic Beef
Perry	Roast Turkey
Ryan	BigWay Hot Pot
Ryan	Gluten Free Mushroom Pizza

Combos:

### Show Combos table

Combo Name	Price
Beef Wellington and Candied Bacon Bourbon	195.58
BigWay Hot Pot and Milk Tea	33.230000000000004
Gluten Free Mushroom Pizza and Lemonade	24.91
Roast Turkey and Beer	38.21
Gluten Free Mushroom Pizza and Root Beer	22.63

PartOf:

### Show Combo is Part Of MenuItem table

Combo Name	Menu Item Name
Beef Wellington and Candied Bacon Bourbon	Beef Wellington
Beef Wellington and Candied Bacon Bourbon	Candied Bacon Bourbon
BigWay Hot Pot and Milk Tea	BigWay Hot Pot
BigWay Hot Pot and Milk Tea	Milk Tea
Gluten Free Mushroom Pizza and Lemonade	Gluten Free Mushroom Pizza
Gluten Free Mushroom Pizza and Lemonade	Lemonade
Gluten Free Mushroom Pizza and Root Beer	Gluten Free Mushroom Pizza
Gluten Free Mushroom Pizza and Root Beer	Root Beer
Roast Turkey and Beer	Beer
Roast Turkey and Beer	Roast Turkey

Addons:

### Show Menu Item Addons table

Addon Name	Menu Item Name	Price
Fries	Beef Wellington	1
Mozzarella Sticks	Gluten Free Mushroom Pizza	1.5
Sakura Vanilla Ice Cream	BigWay Hot Pot	0
Cranberry Sauce	Roast Turkey	1.5
Salad	Beef Wellington	2

Supplier:

### Show Supplier table

Supplier Name
Happy Farm
Jennys Farm
Joels Orchard
Nicks Butcher Shop
Queen Anicas Palace

Supplies:

Show Supplier Supplies Ingredients table

Supplier Name	Ingredient Name	Since
Joels Orchard	Apple	2021-03-01T07:00:00.000Z
Joels Orchard	Salt	2021-03-01T07:00:00.000Z
Nicks Butcher Shop	Turkey	2019-02-15T07:00:00.000Z
Jennys Farm	Potato	2024-05-20T07:00:00.000Z
Jennys Farm	Onion	2024-05-20T07:00:00.000Z
Joels Orchard	Blueberries	2021-03-01T07:00:00.000Z
Queen Anicas Palace	Caviar	2004-02-19T07:00:00.000Z